WTP-8B66 Series

User's Manual

P/N: 205G00WTP8B660, Version V1.2

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Acknowledgments

Greeting & Setup

Thank you for purchasing the WTP-8B66 Panel PC. We wish that this unit will be durable and reliable in providing your needs. Please follow the instructions below to ensure the unit continues to have high performance

Unpacking

After opening the carton, there will be a unit with an accessory box. Examine the contents to see if there are damages to the unit and if all accessories are present.

Setting up

Please read this manual carefully and remember to keep this manual for future reference.

Safety Instructions & Cleaning

The unit has undergone various tests in order to comply with safety standards. Inappropriate use may be dangerous. Please remember to follow the instructions below to insure your safety during the installation and operating process.

Transporting & Placement of unit

1. When moving the unit on a cart; be very cautious. Quick stops, excessive forces and uneven surfaces may cause the cart to overturn thus risking the unit to fall to the ground.
2. If the Monitor display unit does fall to the ground, immediately turn the power off and disconnect cords. Then contact a service technician for repairs. Continual use of the unit may result cause a fire or electric shock. Also, do not repair the unit on your own.
3. Having two or more people transporting the display unit is recommended. In addition, when installing the open frame by suspending it also requires two or more people.
4. Before suspending the unit, make sure the material used for suspension is sturdy and stable. If not properly suspended, the display unit may fall and cause serious injury to people standing nearby as well as to the unit itself.
5. If you wish to mount the display unit, remember to use only the mounting hardware recommended by the manufacturer.

Electrical and Power Source Related

1. This Monitor display unit must operate on a power source as shown on the specification label. If you are not sure what type of power supply used in the area, consult your dealer or local power supplier.
2. The power cords must not be damaged. Applied pressure, added heat, and tugging may damage the power cord.
3. The power cord must be routed properly when setup takes place. We advise that this aspect measure is to prevent people from stepping on the cords or while the unit is suspended to prevent flying objects from getting

tangled with the unit.

4. Do not overload the AC outlets or extension cords. Electrical shocks or fires may occur from overloading.
5. Do not touch the power source during a thunderstorm.
6. If your hands are wet, do not touch the plug.
7. Use your thumb and index finger, grip firmly on the power cord to disconnect from the electrical socket. By pulling the power cord, may result in damaging it.
8. If the unit is not going to be in use for an extended period of time, remember to disconnect the unit.
9. Connect the unit to a power source with the same numerical value as spec. label shown. Please use only the power cord provided by the dealer to ensure safety and EMC compliance.

Various Factors of Environment

1. Do not insert objects into the openings.
2. Do not have liquids seep into the internal areas of the Monitor display unit.
3. Having liquids seep in or inserting objects into the unit may result in electric shocks from taking and/or short circuiting the internal parts.
4. Do not place the Monitor display unit in the presence of high moisture areas.
5. Do not install the Monitor display unit in a wet environment.
6. Do not place near unit near heat generating sources.
7. Do not place the unit in a location where it will come in contact with fumes or steam.
8. Remember to keep the Monitor display unit away from the presence of dust.
9. If water has flow in or seep in, immediately disconnect the open frame unit. Then contact a service technician for repairs.

Ventilation Spacing

1. Do not cover or block the openings on the top and back sides of the display unit. Inadequate ventilation may cause overheating thus reducing the lifespan of the unit.
2. Unless proper ventilation is present, do not place unit in an enclosed area; such as a built-in shelf. Keep a minimum distance of 10 cm between the display unit and wall.

Cleaning the unit

1. Remember to turn off the power source and to unplug the cord from the outlet before cleaning the unit.
2. Carefully dismount the unit or bring the unit down from suspension to clean.
3. Use only a dry soft cloth or clean room wiper when cleaning the LCD panel or touch screen surface. Use a soft cloth moistened with mild detergent to clean the display housing.
4. Remember to avoid having liquids seep into the internal components.

Servicing, Repairing, Maintenance & Safety Checks

1. If the unit is not functioning properly, observe the performance level of the display closely to determine what type of servicing is needed.
2. Do not attempt to repair the Monitor display unit on your own. Disassembling the cover exposes users' to high voltages and other dangerous conditions. Notify and request a qualified service technician for servicing the unit.
3. If any of the following situations occur turn the power source off and unplug the unit. Then contact a qualified service technician

i. A liquid was spilled on the unit or objects have fallen into the unit.
ii. The unit is soaked with liquids.
iii. The unit is dropped or damaged.
iv. If smoke or strange odor is flowing out of the open frame unit.
v. If the power cord or plug is damaged.
vi. When the functions of the unit are dysfunctional.

4. When part replacement is needed. Make sure service technician uses replacement parts specified by the manufacturer, or those with the same characteristics and performance as the original parts. If unauthorized parts are used it may result in starting a fire, electrical shock and/or other dangers.

Battery Installation

Follow below instructions and notice the caution for replacing and disposing of the RTC Lithium battery CR2032 for safety consideration.

CAUTION:

There is danger of explosion, if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instruction.

The specification is subject to change without notice.

Version Change History

Date	Version	Description	Remark
2014/12/29	V1.0	First release	Ivy
2015/04/15	V1.1	Update touch stylus	Ivy
2015/07/15	V1.2	Remove reset button information	Ivy

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How to Use This Manual

This manual is written for the system integrator, PC technician and knowledgeable PC end user. It describes how to configure your WTP-8B66 Panel PC to meet various operating requirements. The user's manual is divided into three chapters, with each chapter addressing a basic concept and operation of the server board.

Chapter 1: System Overview - presents what you have inside the box and gives you an overview of the product specifications and basic system architecture for the WTP-8B66 Panel PC.

Chapter 2: System Installation - describes how to set up the system.

Chapter 3: BIOS Setup Information - specifies the meaning of each setup parameter, how to get advanced BIOS performance and update to a new BIOS. Additionally, the POST checkpoint list will give you a guide for troubleshooting.

The contents of this manual are subject to change without prior notice. These changes will be incorporated in new editions of this manual.

Touch Chemical Resistance

Chemical Resistance

The active area of the touchscreen is resistant to the following chemicals when exposed for a period of one hour at a temperature of 70℉ (21℃) :

- **Industrial Chemicals:** Acetone, Methylene chloride, Methyl ethyl ketone, Isopropyl alcohol, Hexane, Turpentine, Mineral spirits, Unleaded Gasoline, Diesel Fuel, Motor Oil, Transmission Fluid, Antifreeze.
- **Food Service Chemicals:** Ammonia based glass cleaner, Laundry Detergents, Cleaners (Fantastic, Formula 409, Joy, etc.), Vinegar, Coffee, Tea, Grease, Cooking Oil, Salt.

System Overview

WTP-8B66- 15

System

CPU	*Intel® Celeron® J1900 2.0 GHz quad-core processor 10W*	
Graphic	*Intel® HD Graphics*	
Audio	*Realtek ALC262 Audio Codec, 2+2 watts power amplifier*	
LAN	*Intel I210-AT Gigabit Ethernet x 2*	
Memory	*Dual Channel, two DDR3 SODIMM socket support up to 8GB* DDR3L-1333	
Serial ATA	*SATA II controller (3.0Gb/sec) Port x 2*	
Serial port	*External*	*RS232/RS422/RS485 x 1(BIOS 設定, RS485 auto flow), RS232 x 1*
	Internal	*RS232 x 1*
		RS232 (Jumper 5V, 12V) x1
USB	*External*	*USB 2.0 type a x 4*
	Internal	*Mini-PCIE x 2(default) or USB 2.0 pinhead x 2(option)*
		Touch x 1
		Pin head X 2
WDT	*Generates system reset; 256 segments, 0, 1, 2…25*	

BIOS

Brand: AMI

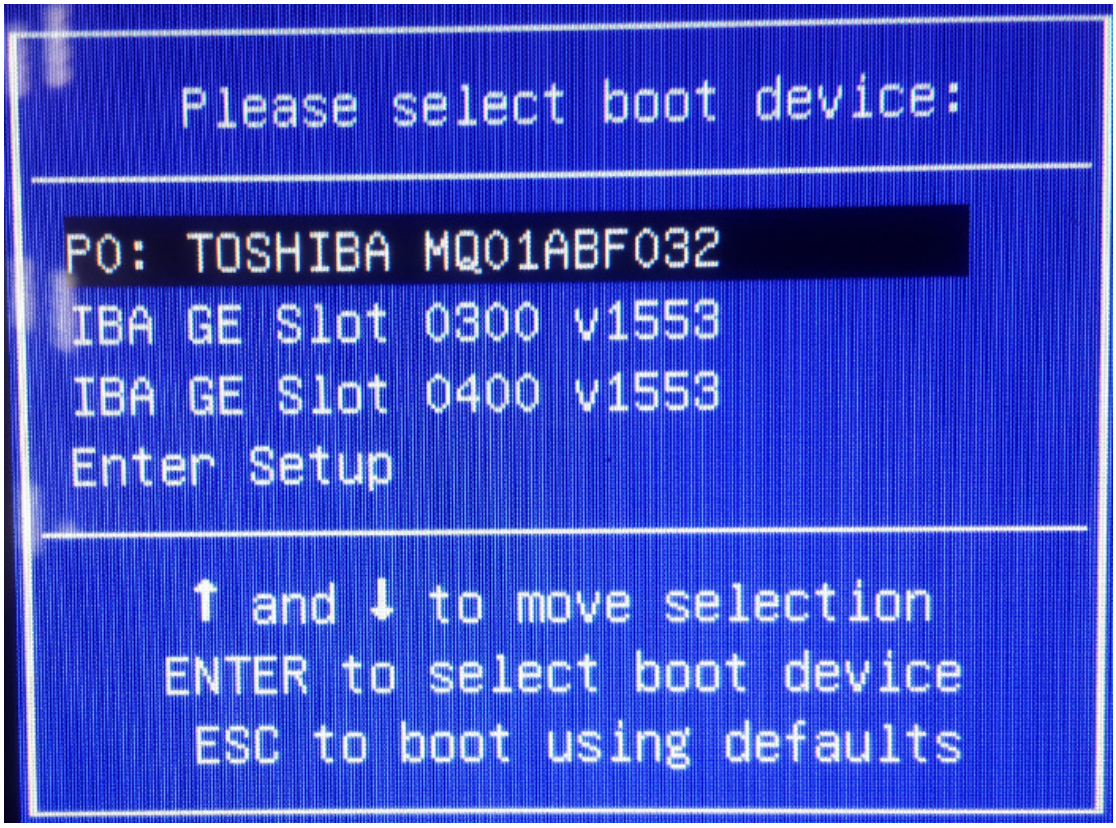
Flash ROM size: 64MB

Support RTC wakeup /Wake on LAN /Power on after power failure/PnP/AC PI/RTC

**com port have to be disabled if PXE enable. It is a limitation

- Press F11 to Quick boot menu.

  Select First LAN port for PXE boot.


Please select boot device:
P0: TOSHIBA MQ01ABF032
IBA GE Slot 0300 v1553
IBA GE Slot 0400 v1553
Enter Setup
↑ and ↓ to move selection
ENTER to select boot device
ESC to boot using defaults

Display

Brand	***Tianma***
Model	*TM150TDS50*
Resolution (pixel)	*1024x768 XGA*
Active Area (mm)	*304.128 (W) x 228.096 (V)*
Outline Dimensions (mm)	*326.5 (H) ×253.5 (V) ×11.8*
Pixel Pitch (mm)	*0.297*
Mode	*TN*

Number of Colors	*16.7M*
View Angle (H/V)	*160/160*
Brightness (cd/m2)	*400*
Contrast Ratio	*600:1*
Response Time (ms) (at 25°C)	*8*
Backlight	*LED*
Weight (g)	*1000*
life time<Hrs>	*50000*

Touch Screen

	ELO
Model name	*E249624*
Type	*5 wire RES*
Glove	*Any type glove*
Input mode	**Point**: Finger or touch pen **Drag**: Finger
Interface	*USB*
Light Transmission	*80±5%*
Hardness	*4H*
Glass thickness	*2.4mm*
Linearity	*X≦1.5%, Y≦1.5%*
Active area	*308.11x232.09mm*
Resolution	*4096x4096*
Lifetime	*35 million activations*

Storage

2.5" SATA drive bay x 1

Expansion slots

Mini-PCIe x2

External water/dust resistant I/O (rear side)

USB 1 x M12 8pin for USB 1/2

1 x M12 8pin for USB 3/4

COM 1 x M12 8pin for COM 1/RS-232/422/485 (Default RS-232)

1 x M12 8pin for COM 2/RS-232

RS-232: TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND

LAN 1 x M12 8pin for LAN 1

Power	*1 x M12 5pin DC power connector*

Power

Power	*DC-In connector x 1*
Power Input	*DC7V~32V*
Power Adapter	*AC 90 ~ 264V / 47 ~ 63 Hz / DC output 12V, IP67 Power ON/Off buttons at rear side*
Power consumption	*67.5w(full loading) 2.3w (S3)*

Mechanical & Environmental

Material construction	*SUS304 stainless steel enclosure, chassis type*
Fanless cooling	
Water and dust protection	*IP66 / NEMA4X*
Operation Temperature	*0~40℃ (IEC60068-2-2, HDD, air flow cooling)*
Storage Temperature	*-20~60℃*
Operation Relative Humidity	*10%~90%, non-condensing*
Storage Relative Humidity	*10%~90%, non-condensing*
Dimensions	*395x309.5x58*
Net Weight	*12.4kg*
Gross Weight	*8.4kg*
Mounting	*VESA (100x100 mmxmm), side mount (M6*2)*

Supported OS

Win 7, Win 7 Pro, Win8.1

Options

1. *Wireless or WIFI and BT kit (2 ant)*
2. *Waterproof COM cable, cable length is 2 meters*
3. *Waterproof USB cable, cable length is 2 meters*
4. *Waterproof LAN cable, cable length is 2 meters*
5. *wall mount / table mount bracket (option)*
6. *SSD*
7. *Intel Core i7-3517U (option) turbo mode disable*
8. *2 external LAN*

Customization (by DRF)

1. *sunlight readable optical bonding*
2. *anti UV and 7H coating*
3. *full flat PCT touch screen IP69K*
4. *1000 nit high brightness LCD*
5. *LCD Auto dimming*

6. *LCD Super dimming (low brightness)*

Packing list

1. *WTP-8B66-15*
2. *DVD-Title for driver and manual*
3. *Power adapter*
4. *Power cord*

Regulatory

FCC, CE (EMC), VCCI class B

Shock/Vibration/Drop

<table>
<tr><th></th><th>Shock</th><th>Vibration</th><th>Drop</th></tr>
<tr><td>General</td><td>Operating:
Pulse shape：Half-sine waveform
Impact acceleration ：15g
Pulse duration：11 ms
Number of shocks：18 shocks (3 shock for each ±axis)
Orientation：±X, ±Y and ±Z axes</td><td>Operating:
5 ~ 500Hz ,
Acceleration ：1.0G
Sweep time：15 minutes
Number of cycle：1 cycle for each axis
Vibration axes：X, Y and Z</td><td>According to ISTA Project 2A
to determine a drop height in the following chart.
(test surface: concrete, with packing)6 surfaces
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(9.53-18.59kg)</td><td>32 in.
(.8 m)</td></tr>
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</td></tr>
</table>

Configurations:

1. *WTP-9ª66-15, Core i5-3317U CPU, 2G RAM, 320G HDD, 4 USB, 2 COM, 1 LAN*

WTP-8B66-19
System

CPU	*FCBGA1023 3rd Generation Intel® Core i7/i5/i3/Celeron® processor (17W max.)*
Chipset	*HM65*
Graphic	*Intel® integrated HD Graphics 4000*
Audio	*None*
LAN	*Marvell 88E8071 Giga LAN x 2*
Memory	*Two 1066/1333 MHz DDR3 SODIMM socket support dual Channel, non-ECC, up to 8GB*
I/O	*EC*
SATA	*SATA 3, 600 MB/s transfer rate x 2, 2nd SATA connector for SATA DOM propose.*
Serial port	*RS232,422,485 x 1 /RS232 x 5*
USB	*External USB 2.0 x 4 (Type A)*
	Internal USB 2.0x 5
WDT	*Generates system reset; 256 segments, 0, 1, 2…255 sec/min.*

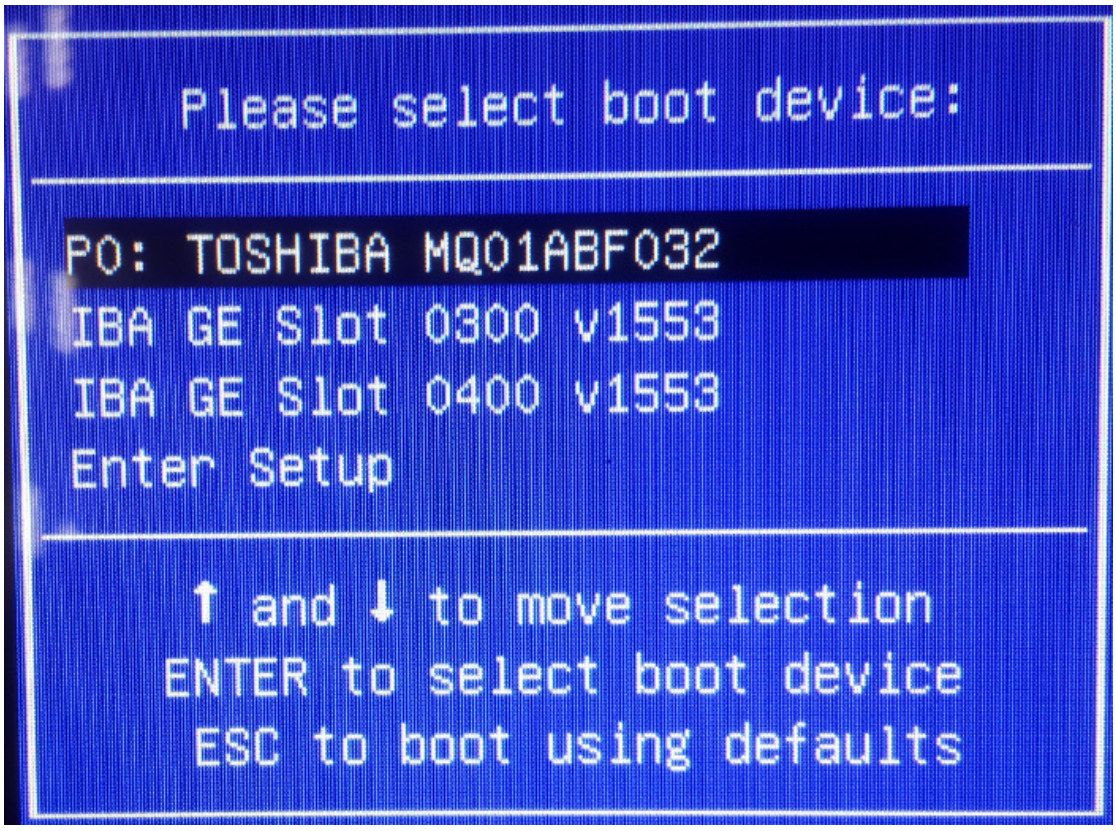
BIOS

Brand: AMI

Flash ROM size: 32MB

Support RTC wakeup /Wake on LAN /Power on after power failure/PnP/ACPI/RTC

PS: com port have to be disabled if PXE enable. It is a limitation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IBA GE Slot 0300 v1553
IBA GE Slot 0400 v1553
Enter Setup
↑ and ↓ to move selection
ENTER to select boot device
ESC to boot using defaults

Display

Brand	***AUO***
Model	***G190EG01 V1***
Resolution (pixel)	*SXGA 1280(x3) x 1024*
Active Area (mm)	*376.32 (H) x 301.06(V)*
Number of Colors	*16.7M*
View Angle (H/V)	*170 / 160*
Brightness (cd/m2)	*350*
Contrast Ratio	*1000:1*
Response Time (ms) (at 25°C)	*5*
Backlight	*LED*
Weight (g)	*1670*
life time<Hrs>	*50000*

Touch Screen

	ELO
Model name	*E000437*
Type	*5 wire RES*
Glove	*Any type glove*
Input mode	**Point**: Finger or touch pen **Drag**: Finger
Interface	*USB*
Light Transmission	*80±5%*
Hardness	*4H*
Glass thickness	*2.4mm*
Linearity	*X≦1.5%, Y≦1.5%*
Active area	*308.11x232.09mm*
Resolution	*4096x4096*
Lifetime	*36 million activations*

Storage

2.5" SATA drive bay x 1

Expansion slots

Mini-PCIe x2

External water/dust resistant I/O (rear side)

USB	*1 x M12 8pin for USB 1/2*
	1 x M12 8pin for USB 3/4
COM	*1 x M12 8pin for COM 1/RS-232*
	1 x M12 8pin for COM 2/RS-232

RS-232: TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND

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	Fanless cooling
Water and dust protection	*IP66 / NEMA4X*
Operation Temperature	*0~40℃ (IEC60068-2-2, HDD, air flow cooling)*
Storage Temperature	*-20~60℃*
Operation Relative Humidity	*10%~90%, non-condensing*
Storage Relative Humidity	*10%~90%, non-condensing*
Dimensions	*458x386x64*
Net Weight	*11.5kg*
Gross Weight	*15kg*
Mounting	*VESA (100x100 mmxmm) side mount (M6*2)*

Supported OS

Win 7, Win 7 Pro, Win8.1

Options

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Configurations:

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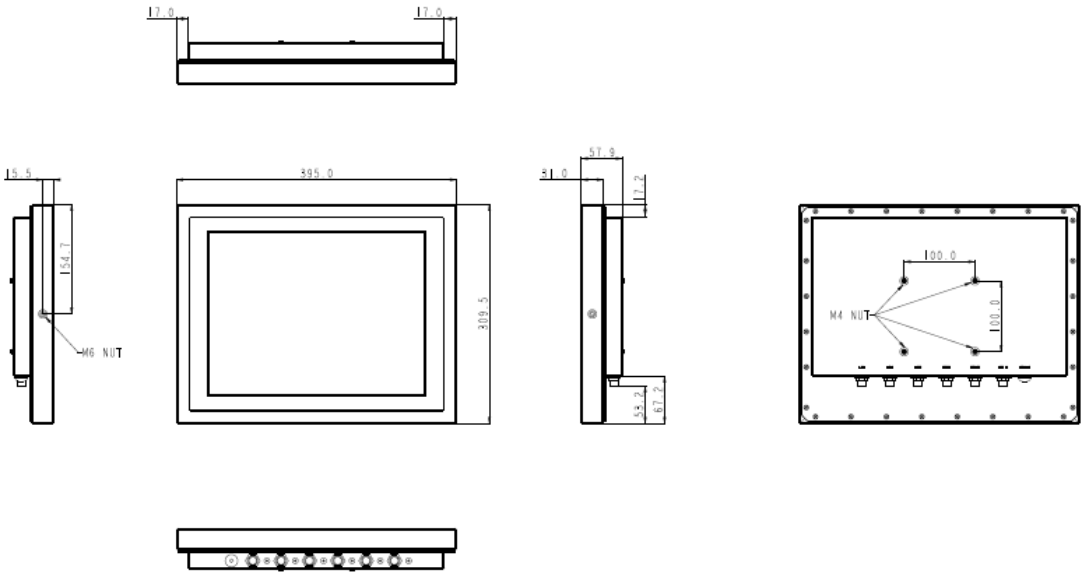
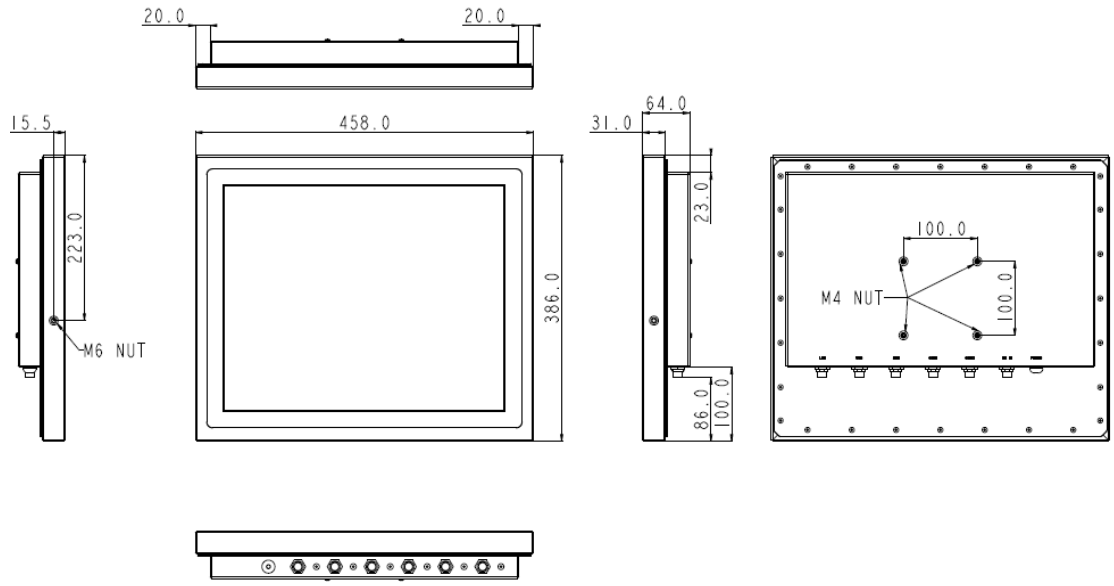
System View

WTP-8B66-15 Outline Drawing



WTP-8B66-19 Outline Drawing



Setting up the System

The following is a summary of the steps in setting up the system for use.

CAUTION: Make sure that power to the system and each of the devices to be connected is switched OFF before plugging in the connectors.

1. Make any required external connections such as the keyboard, and mouse.
2. Plug the appropriate end of the power cord into the power connector of the system. Then plug the other end of the power cord to an electrical outlet.
3. Press the power switch of the system to turn on the system's power.
4. If necessary, run the BIOS SETUP program to configure the system (see Chapter 3).
5. Install the software drivers if necessary.

Installing System Software

Recent releases of operating systems from major vendors include setup programs, which load automatically and guide you through hard disk preparation and operating system installation. The guidelines below will help you determine the steps necessary to install your operating system on the Panel PC hard drive.

NOTE: Some distributors and system integrators may have already pre-installed system software prior to shipment of your Panel PC.

Installing software requires an installed HDD. Software can be loaded in the WTP-8B66 Panel PC using any of below methods:

Method 1: Use the Ethernet

You can use the Ethernet port to download software from the net to the HDD that has been pre-installed in WTP-8B66 Panel PC

Method 2: Use the COM Port

By connecting another PC to the WTP-8B66 Panel PC with an appropriate cable, you can use transmission software to transmit Operation System Software to the HDD that has been pre-installed in the WTP-8B66 Panel PC.

Method 3: Use a External CD-ROM

In order to boot up system from USB-CD/DVD drive, please connect USB-CD/DVD drive, turn on computer power, keep on pressing "F11" key, go into BIOS quick boot menu, select "USB-CD ROM", WAIT FOR 20 SECONDS, then press enter, system OS will boot up from USB-CD/DVD drive directly

Then you can use the external CD-ROM to transmit the software to the HDD that has been pre-installed in the WTP-8B66 Panel PC

Installing the Drivers

After installing your system software, you will be able to set up the LAN, VGA, Audio and USB functions. All drivers are stored in a CD disc, which can be found in your accessory pack.
The various drivers and utilities in the disc have their own text files that help users install the drivers and understand their functions.

Follow the sequence below to install the drivers:

Step 1 – Install Intel® INF Driver
Step 2 – Install Intel® VGA Driver
Step 3 – Install Intel® LAN Driver
Step 4 – Install Audio Driver

Step 1 – Install Intel® INF Driver

1. Open fie of **chipset**
2. Click on the **setup.exe**
3. Follow the instructions that the window shows
4. The system will help you install the driver automatically
5. Reboot system

Step 2 –Install Intel® VGA Driver

1. Open fie of **VGA**
2. Select the OS folder your system is
3. Click on the **.exe** file located in the OS folder
4. Follow the instructions that the window shows
5. The system will help you install the driver automatically
6. Reboot system

Step 3 – Install Intel® LAN Driver

1. Open fie of **LAN**
2. Click on the **setup.exe**
3. Follow the instructions that the window shows
4. The system will help you install the driver automatically

5. Reboot system

Step 4 – Install Audio Driver

1. Open fie of **LAN**
2. Click on the **setup.exe**
3. Follow the instructions that the window shows
4. The system will help you install the driver automatically
5. Reboot system

BIOS Setup Information

BIOS Introduction

The AMI BIOS (Basic Input / Output System) installed in your computer system's ROM supports Intel processors. The BIOS provides critical low-level support for a standard device such as disk drives, serial ports and parallel ports. It also adds virus and password protection as well as special support for detailed fine-tuning of the chipset controlling the entire system.

BIOS Setup

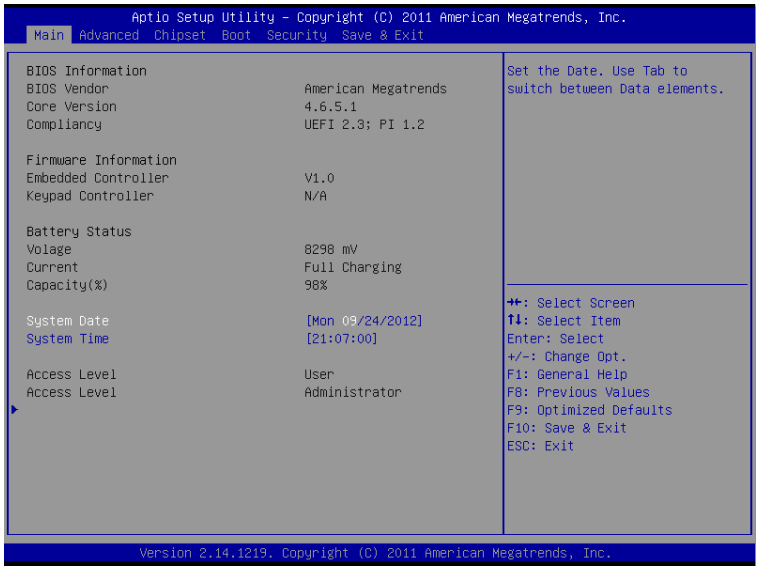
The AMI BIOS provides a Setup utility program for specifying the system configurations and settings. The BIOS ROM of the system stores the Setup utility. When you turn on the computer, the AMI BIOS is immediately activated. Pressing the <Del> key immediately allows you to enter the Setup utility. If you are a little bit late pressing the <Del> key, POST (Power On Self Test) will continue with its test routines, thus preventing you from invoking the Setup. If you still wish to enter Setup, restart the system by pressing the "Reset" button or simultaneously pressing the <Ctrl>, <Alt> and <Delete> keys. You can also restart by turning the system Off and back On again. The following message will appear on the screen:

Press <DEL> to Enter Setup

In general, you press the arrow keys to highlight items, <Enter> to select, the <PgUp> and <PgDn> keys to change entries, <F1> for help and <Esc> to quit.

When you enter the Setup utility, the Main Menu screen will appear on the screen. The Main Menu allows you to select from various setup functions and exit choices.

Main



This section provides information on the BIOS information, Memory information, and Battery information

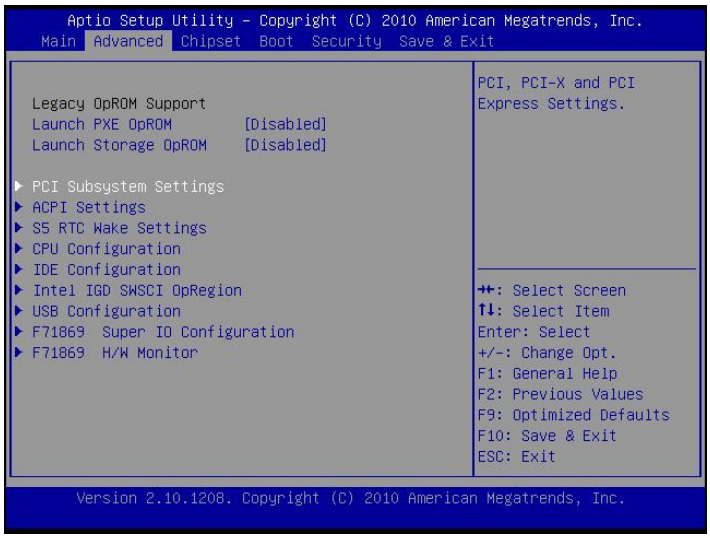
System Date

Set the system date. Use the <Tab> key to switch between data elements.

System Time

Set the system time. Use the <Tab> key to switch between time elements.

Advanced



Launch OpROM Support

Launch PXE OpROM

Enables or disables Boot Option for Legacy Network Devices.

Launch Storage OpROM

Enables or disables Boot Option for Legacy Mass Storage Devices with Option ROM.

PCI Subsystem Settings

PCI ROM Priority

In Case of multiple Option ROMs (Legacy and EFI Compatible), specifies what PCI Option ROM to launch.

PCI Latency Timer

Value to be programmed into PCI Latency Timer Register.

VGA Palette Snoop

Enables or disables VGA Palette Registers Snooping.

PERR# Generation

Enables or Disables PCI Device to Generate PERR#.

SERR# Generation

Enables or Disables PCI Device to Generate SERR#.

Relaxed Ordering

Enables or Disables PCI Express Device Relaxed Ordering.

Extended Tag

If ENABLED allows Device to use 8-bit Tag field as a requester.

No Snoop

Enables or Disables PCI Express Device No Snoop option.

Maximum Payload

Set Maximum Payload of PCI Express Device or allow System BIOS to select the value

Maximum Read Request

Set Maximum Read Request Size of PCI Express Device or allow System BIOS to select the value.

ASPM Support

Set the ASPM Level: Force L0 – Force all links to L0 State : AUTO – BIOS auto configure : DISABLE – Disables ASPM.

Extended Synch

If ENABLED allows generation of Extended Synchronization patterns.

ACPI Settings

Enables ACPI Auto Conf

Enables or Disables BIOS ACPI Auto Configuration.

Enable Hibernation

Enables or Disables System ability to Hibernate (OS/S4 Sleep State). This option may be not effective with some OS.

ACPI Sleep State

Select the highest ACPI sleep state the system will enter, when the SUSPEND button is pressed.

S5 RTC Wake Settings

Wake System with Fixed Time

Enables or disables system wake on alarm event. When enabled, the system will wake on the time specified.

Wake system with Dynamic Time

Enables or disables system wake on alarm event. When enabled, the system will wake on the current time+Increase minute(s).

CPU Configuration

Hyper-Threading

Enabled for Windows XP and Linux (OS optimized for Hyper-Threading Technology) and Disabled for other OS (OS optimized for Hyper-Threading Technology)

Core-Multi Processing

Enable or Disable Core-Multi Processing mode.

Execute Disable Bit

XD can prevent certain classes of malicious buffer overflow attacks when combined with a supporting OS (Windows Server 2003 SP1, Windows XP SP2, SuSE Linux 9.2, RedHat Enterprise 3 Update 3.)

Limit CPUID Maximum

Disabled for Windows XP.

IDE Configuration

ATA or IDE Configuration

Select ATA or IDE configuration.

Configure SATA AS

Select a configuration for SATA controller.

HDD Acoustic Power Ma

Option to enable or disable HDD Acoustic Power Management.

DiPM

Option to enable or disable DiPM

Intel IGD SWSCI OpRegion

DVMT Mode Select

Selects DVMT Mode used by Internal Graphics Device.

DVMT/FIXED Memory

Selects DVMT/FIXED Mode Memory size used by Internal Graphics Device.

IGD – Boot Type

Select the Video Device which will be activated during POST. This has no effect if external graphics present.

LCD Panel Type

Select LCD panel used by Internal Graphics Device by selecting the appropriate setup item.

Panel Scaling

Select the LCD panel scaling option used by the Internal Graphics Device.

GMCH BLC Control

Back Light Control Setting

BIA Control

Spread Spectrum clock

>>Hardware: Spread is controlled by chip;

>>Software: Spread is controlled by BIOS.

TV1 Standard

TV2 Standard

Active LFP

Select the Active LFP Configuration.

No LVDS:VBIOS does not enable LVDS.

INT-LVDS:VBIOS enables LVDS driver by Integrated encoder.

SDV0 LVDS:VBIOS enables LVDS driver by SDV0.

USB Configuration

Legacy USB Support

Allows USB devices to be used in MS-DOS.

EHCI Hand-off

This is a workaround for 0Ses without EHCI hand-off support. The EHCI ownership change should be claimed by EHCI driver.

USB transfer time-out

The time-out value for Control, Bulk, and Interrupt transfers.

Device reset time-out

USB mass storage device Start Unit command time-out.

Device power-up delay

Maximum time the device will take before it properly reports itself to the HOST Controller.

'Auto' uses default value: for a Root port it is 100 ms, for a Hub port the delay is taken from Hub descriptor.

F71869 Super IO Configuration

Serial Port 0 Configuration

Set Parameters of Serial Port 0 (COM A).

Serial Port 1 Configuration

Set Parameters of Serial Port 1 (COM B).

F71869 H/W Monitor

Monitor hardware status

Second Super IO Configuration

Serial Port 1 Configuration

Set Parameters of Serial Port 1 (COM C).

Serial Port 2 Configuration

Set Parameters of Serial Port 2 (COM D).

Serial Port 3 Configuration

Set Parameters of Serial Port 3 (COM E).

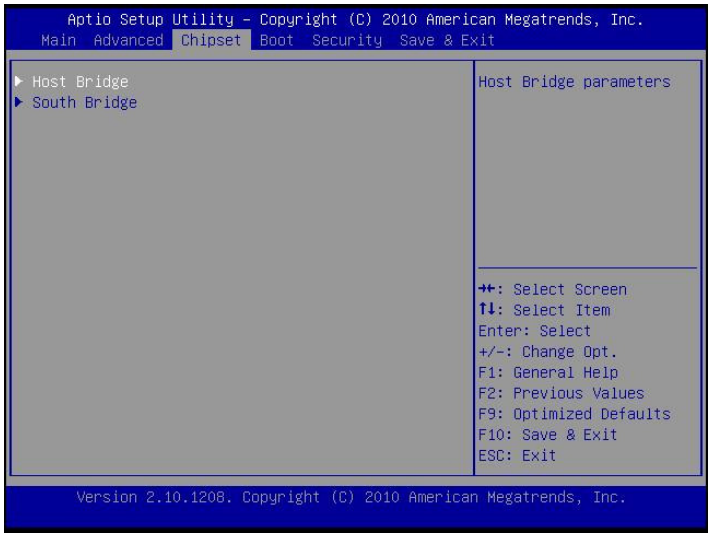
Serial Port 4 Configuration

Set Parameters of Serial Port 4 (COM F).

Serial Port Console Redirection

Serial Port Console Redirection.

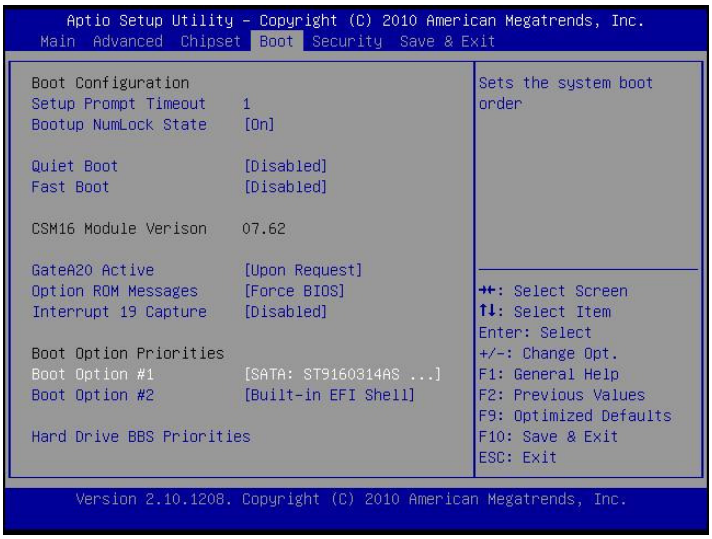
Chipset



Host Bridge/South Bridge

This screen provides information on Host Bridge/South Bridge parameters.

Boot


Aptio Setup Utility – Copyright (C) 2010 American Megatrends, Inc.
Main Advanced Chipset Boot Security Save & Exit
Boot Configuration
Setup Prompt Timeout 1
Bootup NumLock State [On]
Quiet Boot [Disabled]
Fast Boot [Disabled]
CSM16 Module Verison 07.62
GateA20 Active [Upon Request]
Option ROM Messages [Force BIOS]
Interrupt 19 Capture [Disabled]
Boot Option Priorities
Boot Option #1 [SATA: ST9160314AS ...]
Boot Option #2 [Built-in EFI Shell]
Hard Drive BBS Priorities
Sets the system boot order
→←: Select Screen
↑↓: Select Item
Enter: Select
+/-: Change Opt.
F1: General Help
F2: Previous Values
F9: Optimized Defaults
F10: Save & Exit
ESC: Exit
Version 2.10.1208. Copyright (C) 2010 American Megatrends, Inc.

Setup Prompt Timeout

Number of seconds to wait for setup activation key. 65535(0xFFFF) means indefinite waiting.

Bootup Numlock State

Selects the keyboard NumLock state.

Quiet Boot

Allows you to determine whether to display the AMI Logo at system startup. **Disabled** displays normal POST message.

Fast Boot

Enables or disables the quick boot function to speed up the system boot-up process to shorten the waiting time for entering the operating system and to deliver greater efficiency for daily use.

GateA20 Active

This option is useful when any RT code is executed above 1MB.

Upon Request GA20 can be disabled using BIOS services. (Default)

Always Do not allow disabling GA20.

Option ROM Messages

Sets display made for option ROM.

Interrupt 19 Capture

Enables or disables Option ROMs to Trap Int 19.

Boot Option Priorities

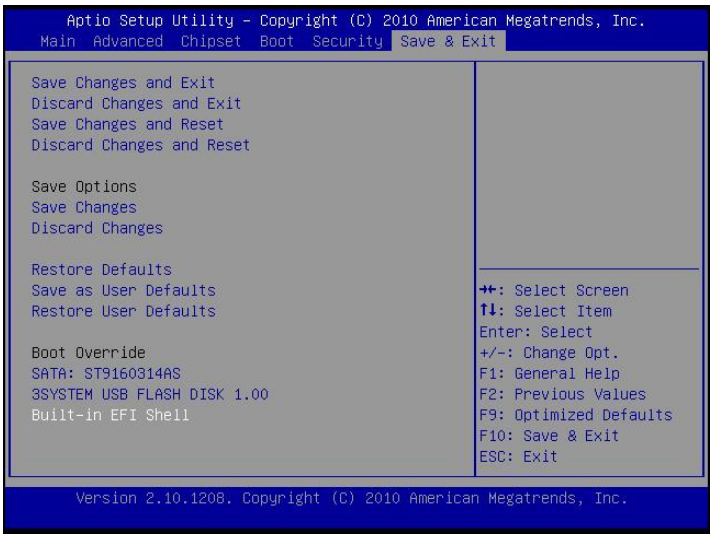
Specifies the sequence of loading the operating system from the installed hard drives.

Security

Aptio Setup Utility – Copyright (C) 2010 American Megatrends, Inc.
Main Advanced Chipset Boot Security Save & Exit
Password Description
If ONLY the Administrator's password is set, then this only limits access to Setup and is only asked for when entering Setup.
If ONLY the User's password is set, then this is a power on password and must be entered to boot or enter Setup. In Setup the User will have Administrator rights.
The password must be 3 to 20 characters long.
Administrator Password
User Password
HDD Security Configur
HDD 0:ST9160314AS
Set Setup Administrator Password
→←: Select Screen
↑↓: Select Item
Enter: Select
+/-: Change Opt.
F1: General Help
F2: Previous Values
F9: Optimized Defaults
F10: Save & Exit
ESC: Exit
Version 2.10.1208. Copyright (C) 2010 American Megatrends, Inc.

Enables or disables the security chip. It is recommended that you use this function with the Administrator/User password.

Save & Exit



Save Changes and Exit

Exit system setup after saving the changes.

Discard Changes and Exit

Exit system setup without saving any changes.

Save Changes and Reset

Reset the system after saving the changes.

Discard Changes and Reset

Reset system setup without saving the changes.

Save Changes

Save the changes done so far to any of setup options.

Discard Changes

Discard the changes done so far to any of setup options.

Restore Defaults

Restore/load default values for all the setup options.

Save as User Defaults

Save the changes done so far as User Defaults.

Restore User Defaults

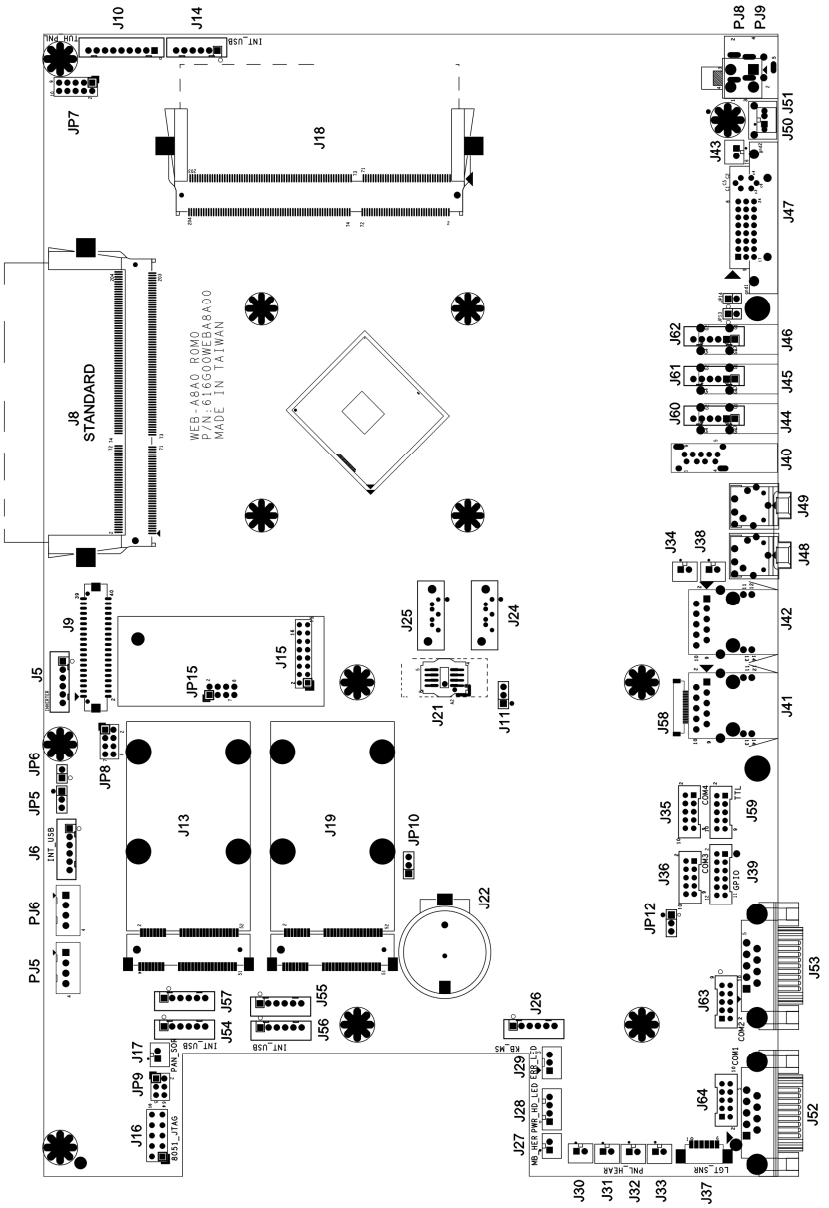
Restore the User Defaults to all the setup options.

EFIGUI_FLASH

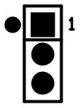
Press <Enter> to execute the simple EFI GUI Flash Program.

Appendix

A. Jumper settings and Connectors



JP5 – Backlight Type Selection

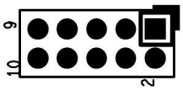


Description	Jumper Setting
Analog Inverter	1-2 (for 10”)
PWM Inverter	2-3(for 12’’/15”)

● JP6 – Backlight control level Selection

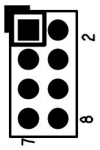
Description	Jumper Setting
+3.3V	1-2
+5V	***OPEN (default)***

● JP7 – Touch Panel Type Selection



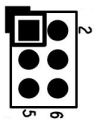
Description	Jumper Setting
3M type	***1-2, 3-4 (default)***
ELO type	5-6,7-8

● JP8 – LVDS Power Selection



Description	Jumper Setting
+3.3VS(for 10"/12"/15")	***5-6, 7-8 (default)***
+5VS(for 17"/19")	1-2, 3-4

JP9 – Sensor Selection

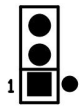


Description	Jumper Setting
No Panel Sensor	***1-2(default)***
No MB Sensor	3-4
Reserved	5-6

JP10 – CMOS Clear

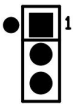
Description	Jumper Setting
Normal Open	***1-2 (default)***
CMOS Clear	2-3

JP11 – SATA / SATADOM Selection



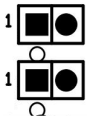
Description	Jumper Setting
SATA	***2-3(default)***
SATA DOM	1-2

JP12 – COM3 Power Selection



Description	Jumper Setting
+5VS	***2-3(default)***
+12VS	1-2

JP13,J14 –*Y cable** Support both DVI+VGA



Description	JP13	JP14
No support (default)	*Open*	*Open*
Support	1-2	1-2

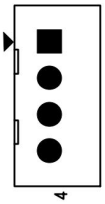
**Support Wincomm Y cable only.*

● JP15 –Panel Resolution Selection

JP15 jumper setting				Panel Resolution	Color Depth
1-2	3-4	5-6	7-8		
0	0	0	0	800x600	6bit
0	0	0	1	1024x768	6bit
0	0	1	0	1024x768	8bit
0	0	1	1	1280x768	6bit
0	1	0	0	1280x800	6bit
0	1	0	1	1280x960	6bit
0	1	1	0	1280x1024	8bit
0	1	1	1	1366x768	6bit
1	0	0	0	1366x768	8bit
1	0	0	1	1440x900	8bit
1	0	1	0	1440x1050	8bit
1	0	1	1	1600x900	8bit
1	1	0	0	1680x1050	8bit
1	1	0	1	1600x1200	8bit
1	1	1	0	1920x1080	8bit
1	1	1	1	1920x1200	8bit

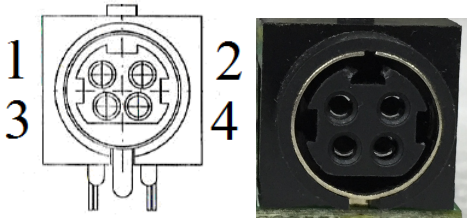
Connector Definition

- **PJ5 /PJ6 – HDD Power Connector**



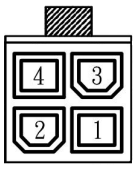
Pin #	Signal Description
1	+12VS
2	GND
3	GND
4	+5VS

- **PJ8 – Power Jack**



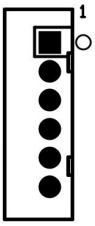
Pin #	Signal Description
1	DC In
2	DC In
3	GND
4	GND

- **PJ9 – Power Input Connector**



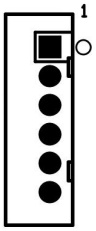
Pin #	Signal Description
1	GND
2	GND
3	DC In
4	DC In

● J5 – LCD Inverter Wafer Header



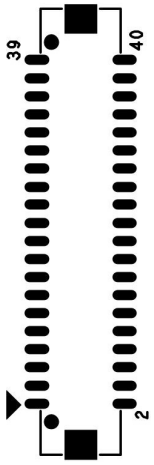
Pin #	Signal Description
1	+12VS
2	+12VS
3	Backlight Control
4	Backlight Enable
5	GND
6	GND

● J6, J54, J56 – Internal USB 2.0 Pin Header



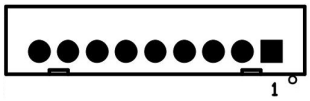
Pin #	Signal Description
1	+5VSB
2	+5VSB
3	Data -
4	Data +
5	GND
6	GND

J9 – LVDS Interface



Pin #	Signal Description	Pin #	Signal Description
39	GND	40	GND
37	Ground	38	GND
35	A_TXD3+	36	B_TXD3+
33	A_TXD3-	34	B_TXD3-
31	GND	32	GND
29	A_CLK+	30	B_CLK+
27	A_CLK-	28	B_CLK-
25	GND	26	GND
23	A_TXD2+	24	B_TXD2+
21	A_TXD2-	22	B_TXD2-
19	GND	20	GND
17	A_TXD1+	18	B_TXD1+
15	A_TXD1-	16	B_TXD1-
13	GND	14	GND
11	A_TXD0+	12	B_TXD0+
9	A_TXD0-	10	B_TXD0-
7	GND	8	GND
5	GND	6	GND
3	+LVDS PWR	4	+LVDS PWR
1	+LVDS PWR	2	+LVDS PWR

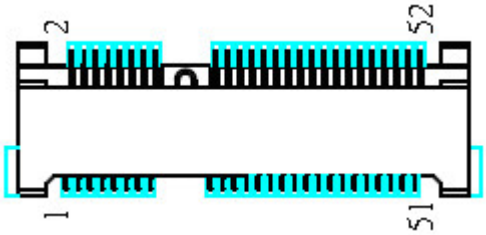
J10 – Resistance Touch Screen Interface



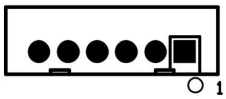
Pin #	Signal Description		
	8-wire	4-wire	5-wire
1	UL(X+)	UL(X+)	UL(X+)
2	UR(Y+)	UR(Y+)	UR(Y+)
3	N/A	N/A	PROBE
4	LR(X-)	LR(X-)	LR(X-)
5	LL(Y-)	LL(Y-)	LL(Y-)
6	X+_DRIVE	N/A	N/A

7	Y+_DRIVE	N/A	N/A
8	X-_DRIVE	N/A	N/A
9	Y-_DRIVE	N/A	N/A

● J13 / J19 – Mini PCI Express Socket



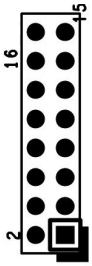
● J14 –P-CAP Touch screen interface*



Pin #	Signal Description
1	+5VSB
2	+5VSB
3	Data -
4	Data +
5	Ground
6	Ground

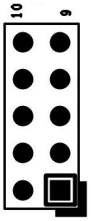
* Res(J10) with P-CAP(J14) select one

● J15 –TPM / ID-394



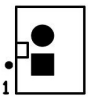
Pin #	Signal Description	Pin #	Signal Description
16	+3.3VSB	15	SUS_STAT#
14	SMB DATA	13	GND
12	SMB CLK	11	Debug CLK
10	CLKRUN#	9	LPC Frame#
8	+5VSB	7	LPC AD3
6	+3.3VS	5	LPC AD2
4	SERIRQ	3	LPC AD1
2	PLT reset#	1	LPC AD0

J16 – For JTAG



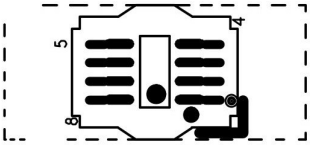
Pin #	Signal Description	Pin #	Signal Description
10	Reserved	9	GND
8	Reserved	7	+3.3V
6	Reserved	5	+3.3V
4	C2D	3	GND
2	GND	1	+3.3V

J17 – Panel Temp Sensor Connector

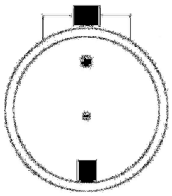


Pin #	Signal Description
1	PANEL_SENSOR
2	GND

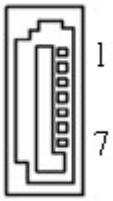
J21 – BIOS Socket



J22 – Battery Socket

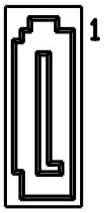


J24 – Standard SATA / SATA DOM Interface



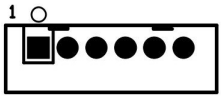
Pin #	Signal Description
1	Ground
2	Tx+
3	Tx-
4	Ground
5	Rx-
6	Rx+
7	Ground / +5VS

J25 – Standard SATA Interface



Pin #	Signal Description
1	Ground
2	Tx+
3	Tx-
4	Ground
5	Rx-
6	Rx+
7	Ground

J26 – PS2 KB/MS

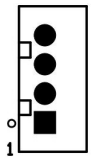


Pin #	Signal Description
1	KBDATA
2	MSDATA
3	Ground
4	+5VSB
5	KBCLK
6	MSCLK

J27 – MB Heater Connector

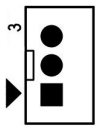
Pin #	Signal Description
2	GND
1	+12VSB

J28 – Power / HDD LED



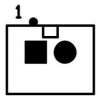
Pin #	Signal Description
4	PWR_LED#
3	+3.3VSB
2	+3.3VSB
1	SATA_LED#

J29 – Heater Error / Heating LEDs



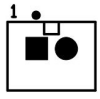
Pin #	Signal Description
3	+3.3V
2	HEATER_LED#
1	ERROR_LED#

J30, J31, J32, J33 – Panel Heater Connector



Pin #	Signal Description
1	+12VSB
2	GND

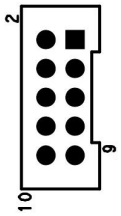
J34, J38 – RIGHT / LEFT CH for Speaker.



Pin #	Signal Description	
	J34 (RIGHT CH)	J38 (LEFT CH)
1	ROUT+	LOUT+

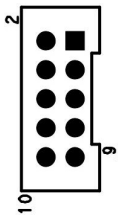
2	ROUT-	LOUT-

J35 – Internal COM4 Serial Port



Pin #	Signal Description	Pin #	Signal Description
2	232_DSR#	1	232_DCD#
4	232_RTS#	3	232_SIN
6	232_CTS#	5	232_SOUT
8	232_RI#	7	232_DTR#
10	+5VS	9	GND

J36 – Internal COM3 Serial Port

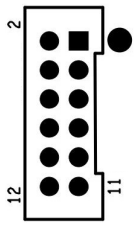


Pin #	Signal Description	Pin #	Signal Description
2	232_DSR#	1	232_DCD#
4	232_RTS#	3	232_SIN
6	232_CTS#	5	232_SOUT
8	232_RI#	7	232_DTR#
10	+5VS/+12VS	9	GND

J37 – Light Sensor Connect

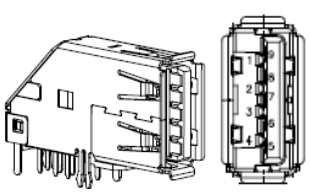
Pin #	Signal Description
1	+3.3V
2	NC
3	Ground
4	SCL1
5	NC
6	SDA1

J39 – GPIO Connect

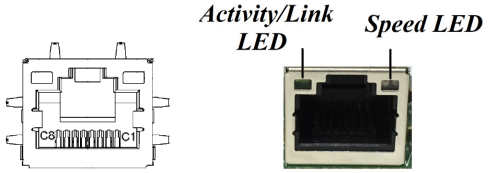


Pin #	Signal Description	Pin #	Signal Description
2	GEN_GPI1	1	GEN_GPO1
4	GEN_GPI2	3	GEN_GPO2
6	GEN_GPI3	5	GEN_GPO3
8	GEN_GPI4	7	GEN_GPO4
10	+5V	9	+5V
12	GND	11	GND

J40 – External USB 3.0 Port



J41 / J42 –External RJ45 Ethernet Port



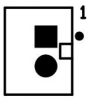
Activity/Link LED

Status	Description
OFF	No Link
Blinking	Data Activity
ON	Link

Speed LED

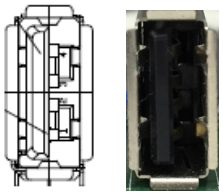
Status	Description
OFF	10 Mbps
Green	100 Mbps
Orange	1 Gbps

J43 – Power Switch connect



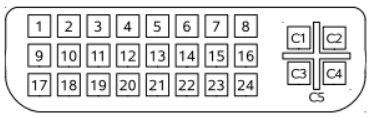
Pin #	Signal Description
1	Power ON
2	GND

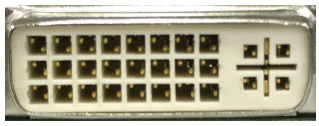
J44,J45,J46 – External USB 2.0 Port



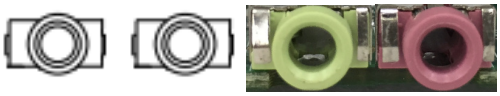
Pin #	Signal Description
1	+5V
2	USB_D-
3	USB_D+
4	GND

J47 – External DVI-I Connector



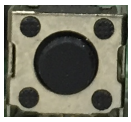


J48 / J49 – External Audio Phone Jack



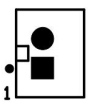
Audio Jack	Signal Description
J48	Line Out (stereo) Green
J49	Microphone (stereo) Pink

J50 – Reset Button



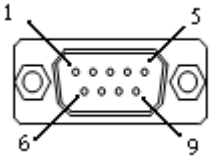
Pin #	Signal Description
1	SYS_RESET#
2	GND
3	GND
4	GND

J51 – Reset connector



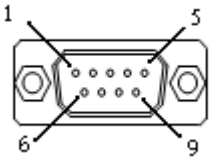
Pin #	Signal Description
1	SYS_RESET#
2	GND

J52 – External COM1 Connector



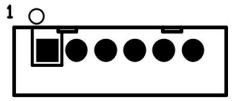
Pin #	Signal Description		
	RS-232	RS-422	RS-485
1	DCD	TX D-	DATA-
2	RXD	TX D+	DATA+
3	TXD	RX D+	--
4	DTR	RX D-	--
5	GND	--	--
6	DSR	--	--
7	RTS	--	--
8	CTS	--	--
9	RI#	--	--

J53 – External COM2 Connector



Pin #	Signal Description	Pin #	Signal Description
1	DCD	2	RXD
3	TXD	4	DTR
5	GND	6	DSR
7	RTS	8	CTS
9	RI#	10	--

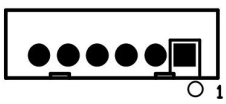
J54/J55*/J56/J57* – Internal USB 2.0 Pin Header



Pin #	Signal Description
1	+5VSB
2	+5VSB
3	Data -
4	Data +
5	GND
6	GND

*J55/J57 reserve for Mini PCIE x1 share.

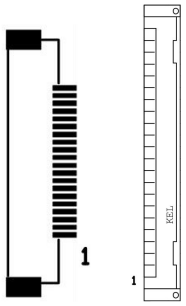
J60/J61/J62 – Internal USB 2.0 Pin Header



Pin #	Signal Description
1	+5VSB
2	+5VSB
3	Data -
4	Data +
5	GND
6	GND

*Co-lay with external USB port (J44, J45 and J46).

J58 – External PoE Slot (Option)



Pin #	Signal Description
1	LAN0_MDI0_P
2	LAN0_MDI0_N
3	GND
4	GND
5	LAN0_MDI1_P
6	LAN0_MDI1_N
7	GND
8	GND
9	GND
10	GND
11	GND
12	GND
13	GND
14	GND
15	LAN0_MDI2_P
16	LAN0_MDI2_N
17	GND
18	GND
19	LAN0_MDI3_P
20	LAN0_MDI3_N